

As you all know: What do your vague words say about you?
Hedges, boosters, and extravagant comparisons in expressive style.

Robert Hogenraad, Emeritus
Université catholique de Louvain, Louvain-la-Neuve, Belgium

Hogenraad, R. (2017, July, 12-13). Paper presented at the Inter-disciplinary
Research in Security Psychology and its State-of-the-art. Yekaterinburg, p. 35-51.

ResearchGate DOI: 10.13140/RG.2.1.2746.4563

Abstract.

In Hogenraad (2015), one looked for odd juxtapositions (“contradictory associations” in Empson, 2004, p. 2) in the same sentence, odd enough to create conditions of surprising shapeshifts. The term ‘metaphor’ was shorthand for odd juxtaposition in the speeches of President Putin and NATO Secretary-General during the Ukrainian crisis. If metaphor as formation of oppositions in the language of a text is not a lie ¹, it makes language ambiguous (Aristotle, 2015, p. 298, Topica, Book VIII, part 3; Atlan, 2010, p. 32, on verbal wrongs and socially useful local truths; Black, 1979, p. 30). And that concerns us. Ambiguity makes matters “not always exactly what they seem: Outward appearances are often deceptive” (Phaedrus, 1992, p. 82). To be fair, not everything is shadowy in odd juxtapositions. For expressing one’s thoughts in allegories and veiled sentences can be a mark of respect for an audience. Odd juxtapositions can be an indirect way of passing a message, allowing one to avoid being rude or tough and away from a turning of the screws. Yet, by crossing categorical boundaries of words used as substitutes for that for which there is no other word available (catachresis), metaphor changes polarities, becoming a free interpretation of one’s subjective view. Which reverses the priority of denotation over connotation. Hovering just beyond the senses, cross-categorical switches cut both ways: We may understand for a moment while a split-second after, what we understand blinds us (see de Man’s ‘*Blindness and insight*’, 1971). This is where language breaks down. As a test of de Man’s undoing of metaphor, we assess the rate of vagueness that characterizes texts high and low in odd juxtapositions. Using Hiller’s (1971; see also Empson, 2004) vagueness dictionary, we evidence positive relations between odd juxtapositions and vagueness.

Keywords. Computer-aided content analysis; contradictory associations; cross-categorical switches; hedges and boosters; NATO; President Putin

As you all know: What do your vague words say about you?

Hedges, boosters, and extravagant comparisons in expressive style.

“Once it had been written, the word had already occurred” (Vodolazkin, 2015, p. 32)

“Make it difficult” he meant. He, was Viktor Shklovsky, it, was language, text, prose (Berlina, 2016a, b; Vitale, 2013). Shklovsky (1990, p. 13) was describing the “principle of difficulty” to create enstrangement (*остранение*, with one ‘н’ as Shklovsky ² wanted it). The purpose of enstrangement is “to lead us to a knowledge of a thing through the organ of sight instead of recognition” (1990, p. 6; also Miall & Kuiken, 1994) – or at least intimations of seeing. During the Ukrainian crisis (December 2013 to September 2014), the principle showed widely in President Putin’s speeches, but restrainedly in NATO’s (Hogenraad, 2015).

In his March 18, 2014 speech, summoning crowds, President Putin doubled down and crowded the Ukrainian events with the medieval religious history of Russia, bringing back memory to trigger the past into the present –even if the past is always incomplete ³. Doing so reintroduces redemptive eschatology in an issue NATO considered merely secular. Eschatology is the portal to this study: From then on, one need using less conventional ways to analyze the spiritual quality of the President’s speeches. Here is why.

Expressing a vision that calls exploring ancestral mental images as a case of direct knowledge of spiritual truth is enstrangement. This long-term vision of endeavors to come is not easy to express in plain words. For that reason, the speaker lodges the text with a cryptic quality of figures of speech, allegories, and roving metaphors. We expected disruptions, that is, extravagant comparisons and odd juxtapositions in Putin’s speeches. The alternative is an unspeakable emotion ⁴. The context of metaphors and allegories is personal, that is, known only to the speaker, as is an uncooperative private language. Visionary making the future into the present, the speaker invents as much as he is invented, but on that last point we

have no grip (Merleau-Ponty, 2012, p. 195 –“*a genius for ambiguity that might well serve to define man*”). The analyst then has to tag on the speaker’s verbal theatre, necessarily ambiguous. At the other end of the barrel, NATO speeches displayed fewer such disruptions. And it showed (Hogenraad, 2015, Figures 5 and 6, and Tables 6, 7, and 8). We also expected more shifting trends in Putin’s speeches after the turn of March 18, 2014 (Law creating Crimea within the Russian Federation), and opposite trends in NATO’s speeches. So it proved too.

1. Why ambiguity matters

“*When the general atmosphere is bad, language must suffer*” Orwell (2010, p. 18). Metaphors hide meaning. They also reduce the self to images. We expect figures of speeches, allegories, and metaphors to cause vagueness. We suspect that cognitive-emotional states caught in such cross-currents connect with verbal changes in the ambiguity registry (Empson, 2004). By vagueness, we mean a language that carries no specific facts or knowledge, and suggests an unwillingness to communicate clearly. Another possibility is vagueness bringing on changes slow enough to go undetected, but more acceptable than abrupt ones (Gilbert, 2007, Section “Perceiving differences, pp. 45-58).

There are circumstances in which ambiguous words are fitting, as when negotiating a draft agreement (Doonan & Foster, 2001, p. 97). There is a sense in which ambiguity is good because it allows ideas to spread further and change, as by memetics (Blackmore, 1999). At the moment one molds an idea into a frozen form, the idea drains and is less likely to lead to innovative solutions in negotiation. In “*The Ambiguity Advantage*”, Wilkinson (2006) has described a progression running from ambiguity, risk, vagueness, confusion down to chaos: Leaders can use creatively and profit from ambiguity. Writes Norris (2013, p. 6) “*Ambiguity belongs to a normal, not a uniquely poetic order of thought and language*”. With vagueness, we are in good company, as the path is thick with linguists, psychologists, literary critics, and novelists. The last to come to our mind –it should have been the first, depending on whom you ask—being Henry James (2016), in “*French poets and novelists*” (1878), “*We admit nevertheless that there is something else, beneath and*

behind, that belongs to the realm of vagueness and uncertainty, and into this we must occasionally dip” (p. 85).

There is what people say and how they say it. We concentrate on the how. Putin and Rasmussen’s words, not the personas, are the scope of the study and both become a ‘text’. From here on, we turn from event to text.

2. Odd juxtapositions and ambiguity factories

The next turn, we tagged odd juxtapositions using a series of polar binaries and identified the number of times pairs of binaries are present in the sentences. (In Empson’s 2004, the term ‘opposite/s’ appears 72 times). A large set of opposites secures a systematic sample of odd juxtapositions over time. Polar binaries belong to various thesauruses built out into computer-readable dictionaries. The latter (more anon) contain opposite dictionary categories like abstract and concrete (in Paivio’s dictionary), primary and secondary thoughts (in Martindale’s dictionary), affiliation and power (in Hogenraad’s dictionary), and high- and low-emotion (in Pennebaker’s dictionary). One will also seek odd juxtapositions of high-imagery words (verbal registry) and high-emotion ones (emotions slip away from language) along Paivio’s (1978, 1979) and Bucci’s (1985; 1995; Mergenthaler & Bucci, 1999) dual-coding model. Both Martindale’s creativity and Paivio’s dual coding models mean emerging insights in verbal accounts. Making thought and feeling to work together allows for an emotional experience to arouse awareness. The line is fine between Bucci’s dual-coding model and Nietzsche’s idea of knowledge found inseparable from affect and moral values. Thus, “There is only a seeing from a perspective, only a ‘knowing’ from a perspective, and the *more* emotions we express over a thing, the *more* eyes, different eyes, we train on the same thing, the more complete will be our ‘idea’ of that thing, our ‘objectivity’” (Nietzsche, 2003, III, 12, p. 86)

3. Ambiguity. Sentence length, abstract words, long sentences, vague expressions, polysemous words, and co-occurrences of opposite words are, need one say, signs of ambiguity. We built out a new list of vague words as a mash up of existing lists of vague words quarried from several sources completed with our own judgments (Hogenraad, 2016a). In linguistics, vague words are ‘*hedges*’; we added

a list of intensifiers ('*boosters*') by way of antonyms to hedges (Hogenraad, 2016b). Vagueness and hedges go in the broad category of 'fuzziness' (Chafe, 1984, p. 48).

Method

Texts

Putin's 112 speeches (193,713 words and 8,917 different words) run from Nov. 22, 2013 to Sep. 10, 2014 (30 weeks). (President Vladimir Putin, *All speeches*). NATO's 129 speeches (135,563 words and 5,805 different words) cover 28 weeks (Dec. 1, 2013 to Sep. 23, 2014) (NATO Secretary-General Anders Fogh Rasmussen, *All speeches*). An unverifiable possibility is that different translators may have been at work (Bestgen, personal communication). Dictionaries are broad categories of verbal equivalents (for example *drink*, *champagne*, or *brandy* tagged as FOOD in Martindale's Regressive Imagery Dictionary) so translators would still hit the right category whichever word they choose (Martindale, 1975, p. 117).

Computer-aided content analysis and dictionaries

We used the PROTAN program (Hogenraad, Daubies, Bestgen, & Mahau, 2003) to classify text words into dictionary categories. In Hogenraad (2015), dictionaries were Martindale's Regressive Imagery Dictionary (RID), Hogenraad's MOTIVE Dictionary, Paivio's Concreteness (CONC), Imagery (IMAG), and Meaningfulness (MEAN) Dictionaries, and Pennebaker's Linguistic Inquiry and Word Count (LIWC). To these, we now add Hiller's (1971) vagueness dictionary⁵.

Insert Tables 1 and 2 about here

"In the beginning was the dictionary"

1. The Regressive Imagery Dictionary (RID) (Martindale, 1975) (not shown) assesses imagery and concrete thought contents (*pp* for "primary"), their reverses, abstract constructions (*ps* for "secondary"), and emotions (*em*). Concrete contents are "found in the world" (*food*, *chaos*, *flying*). Abstract contents are "built into the world" (*money*, *work*, *discipline*, *police*, *justice*).
2. Concreteness (CONC), Imagery (IMAG), and Meaningfulness (MEAN) (Paivio, Yuille, & Madigan, 1968). The dictionary contains average ratings, by scores of

judges, of 925 words on 7-point scales on the three dimensions. Concreteness refers to sense experience; imagery refers to the power to arouse images; meaningfulness is the mean number of written associations in 30 sec.

3. The MOTIVE Dictionary (Hogenraad, 2003) is a database of needs for affiliation (*nAff*) and needs for power (*nPow*) (not shown).

4. The Linguistic Inquiry and Word Count (LIWC) (Pennebaker, Francis, & Booth, 2001) allows evaluating in texts the degree of affects ($n = 617$ entries) of positive and negative emotions (not shown).

5. Hiller's (1971) vagueness dictionary. We set up this dictionary to swallow up and quantify how much vagueness there is in texts. Vagueness is a characteristic of style, that is, words with a diffuse meaning (Sebeok, 1960, pp. 370-71). There is no semantic homogeneity in the Hiller's Communication Vagueness Dictionary (Hiller, Marcotte, & Martin, 1969), most of which comprises filler words (Table 1). Hiller's dictionary detects item clarity in questionnaires (Ford, Stetz, Bott, & O'Leary, 2000), and correlates with writing quality in students' essays (Hiller, Marcotte, & Martin, 1969). Because vagueness characterizes style and not content, one can extend the dictionary from its origin in education to other kinds of written documents. And there is no incongruity in evaluating ambiguity using a dictionary as a plumb line (Hogenraad, McKenzie, & Péladeau, 2003).

6. Boosters dictionary (Hogenraad, 2016b). If hedges mitigate verbal expressions, booster words intensify them, often suggestive of a manipulative spiel (Table 2). There is no short of linguistic studies on hedges and boosters (Albl-Mikasa, Glatz, Hofer & Sleptsova, 2015; Hu & Cao, 2011; Hyland, 1996, 1998; Laserna, Seih, & Pennebaker, 2014; Nikula, 1997; Peacock, 2006; Yagiz & Demir, 2015). We used them after some fixit to complete Hiller's dictionary when new entries qualified for inclusion, and to make up the whole list of booster entries (Hogenraad, 2016a and b), relying particularly on Peacock's list (2006). It remains to justify, first the way to solve the problem of working with unique events, secondly the way to tag odd juxtapositions in texts.

Procedures

1. Generalizing from unique events, as if to replicate time

A literary work is a datable event and, by definition, unrepeatable. The heart of the problem is that one cannot analyze sampling error when there is only one text, for there is no distribution theory to turn to! Quantitative students of literature can dissent all they like, a literary text has no competitor. Not a chance they may be game for it. The matter is that of the true value of a single statistical test: Repeating a scientific result to make it more credible is more important than the result in itself (Shapin, 1996, p. 107). We use the vicarious nature of language to advantage: “‘Reproduction’ has always and forever been the only way in which human beings have been able to acknowledge reality and to talk about it” (Poirier, 1999, p. 119). As if any text was always but the sample of another.

The alternative is to simulate observations we don’t have using those we have. Using a computer-intensive statistical method called “bootstrap” (Shalizi, 2010), resampling evaluates how stable is an estimator across sampling variations. Bootstrapping consists of treating the data as if they were the population, and recreate thousands of samples from it by sampling with replacement (Hogenraad & McKenzie, 1999; Péladéau, 1996). One calculates the statistical estimator one has interest in, say R^2 or t values, for each bootstrapped sample. Running thousands of bootstrapped simulations of statistical estimators to capture the confidence region of the boundary values of unique textual data allows evaluating the stability of estimators (Diaconis & Efron, 1983). We have created 20,000 pell-mell versions of the data. One should be more confident in 20,000 results yielding real confidence intervals than in a single estimated interval. We now turn towards four indicators we set to work on the corpuses of speeches. Here is how.

2. Computing a rate of odd juxtaposition

One estimates the juxtaposition rate by comparing categories from two different dictionaries at a time (or opposite parts of the same dictionary) in texts. We count the number of opposite categories that butt one against the other within each sentence (,:!?:). The rate is the square root of the ratio –times 1,000-- of the number of sentences containing categories put side by side to the sum of (1) the sentences containing at least one of the first set of categories involved and (2) those containing at least one of the second set. Detecting, say, abstract and concrete

categories in a sentence, would signal an incongruous use of language. With rating scales dictionaries (Paivio's), we oppose low (1-3) to high ratings entries (5-7).

Bucci's model of near-simultaneous emergence of strong image and strong emotion touches on on-stage dramaturgy. Looking for juxtapositions of high imagery words and emotion words, one tests Bucci's (1985; 1995; Mergenthaler & Bucci, 1999) dual-coding cognitive model. In this case, one opposes Martindale's *pp* thought contents to its *em* emotional contents. One could also oppose the same *pp* contents to Pennebaker's LIWC words of affects, themselves subdivided into positive and negative emotion words (Chung & Pennebaker, 2011).

3. Computing the rate of hedges and boosters

A rate involves the ratio of the number of hits to the total number of events: The rate of hedges or boosters relates the number of hedges and the total number of words in the document under analysis. There are two ways to calculate the rate, by frequency or density. Frequency refers to the number of time a given category hits a text word. Density, to the number of times the category hits different text words at least once. For example, category 'hedges' could hit 100 times (in frequency) the same text word, say, "as_you_all_know", or 100 times (in density) 100 different text words, say, "and_so_on", "no_doubt", "a_lot", "sometimes", et cetera. Russian translators proved reporting various hedges in the translated documents. This is welcoming news as translators at times ignore phatic tokens in passing on information (Albl-Mikasa, Glatz, Hofer, & Sleptsova, 2015).

Results

I. Odd juxtapositions. The morning after March 18, 2014: The caesura

Among the many tests of odd juxtapositions, those with features of imagery and emotions turn most significant (Table 3 and Figures 1 and 2). Thus, we find primary thought contents (RID) side by side with emotions (RID) in Putin $t(28) = -2.4$, $p < .05$, β CI95% .59/4.86 (Figure 1, lower graph). March 18, 2014 –weeks 16-30-- (President Vladimir Putin, March 18, 2014) and especially May 9, 2014 ("Great Victory Day" in Sevastopol) mark a discontinuity in style. This is where language breaks down. In NATO, we find primary thought contents (RID) side by

side with emotions (RID), this time in the opposite direction: $t(25) = 2.6, p < .05, \beta$ CI95% .84/4.97 (one outlier) (Figure 2, lower graph).

Insert Table 3 and Figures 1 and 2 about here

II. Hedges, boosters, trajectories and correlations

The trajectories of both types of fillers, vague words and intensifiers, increase significantly in Putin's speeches, marking a large narrative shift after March 18, 2014 (Figures 3 and 4). In NATO, their trajectories decrease, but not significantly (Figures 5 and 6). The surprisingly high correlations (Table 4) need a little qualifying. In Putin, increasing rate of odd juxtapositions goes with a greater variety of vague words and intensifiers, as if both were there in support of daring comparisons. In NATO, decreasing rate of juxtaposition goes with a lower variety of vague words and of intensifiers, yet also with the same trite intensifiers more often repeated at the expense of variety ($r = -.59, p < .001$, Table 4). A dominant trend is present. It heightens artificially with the weekly partition of the speeches. Juxtapositions, hedges, and boosters tie in, but not necessarily in the same sentence, or the same speech, or even the same day of the week. The correlations mirror a general disposition more than a delimited intra-sentence association yet to prove.

Insert Table 4 and Figures 3 and 4 about here

III. Proofs by contradiction (Popper's falsifiability, 1963)

Instead of looking for odd reverse associations, we look here for associations between similar categories. This should, does indeed, deactivate the paradox (catachresis) of having incongruous categories within the same sentence. We watch non-significant associations (within the same sentence) of '*primary thought contents*' of the RID and for Paivio's '*concreteness*'. In Putin: $R^2 = .06$, $F(1,28) = 1.8$ (*ns*), $\beta = .04$, β CI 95% [-.02/.09]. In NATO: $R^2 = .02$, $F(1,26) = 1.6$ (*ns*), $\beta = -.02$, β CI 95% [-.08/.04].

Insert Figures 5 and 6 about here

Exit line

Looping from the end of this essay to the beginning, one may find charts and tables heavy going, but never lose sight of the real personas behind them. Besides, none of those charts maps directly onto reality. This is not the interesting question, tough. The nub of the early subject was the ambiguity, or not, of speeches in cultures in which one believes each word to have one fixed meaning (Wilks, 1997). Writes I. A. Richards (1930, p. 212): “*no word carries a fixed feeling quite irrespective of its context*”. The speech DNA is the utterance, not the word. William James would have concurred: “*How comes it about that a man reading something aloud for the first time is able immediately to emphasize all his words aright, unless from the very first he have a sense of at least the form of the sentence yet to come*” (1890, Chap. IX, ‘The stream of thought’, pp. 253-4).

The other fertile question was of the relation between ambiguity and odd juxtapositions. Seen against other languages at home with ambiguity, like Chinese open to different meanings (Richards, 1932; Eagleton, 2002), our question takes on a Eurocentric shadow. “*To a mind formed by modern Western training the interpretation of the Chinese Classics seems often an adventure among possibilities of thought and feeling rather than an encounter with facts*”. Where did we read that? Of all places, in I. A. Richards (1932) on page 1 of his “*Mencius on Mind*”. In the end, the snag of ambiguity could be nothing more than a fever caused by Eurocentrism (see also Empson’s 2004 “generous skepticism”, p. 44). Ambiguity may just signals the presence of different but sound mind-sets (Malinowski, 1935), allowing us to alight with some thinking to go through and an interesting reason for stopping here.

Acknowledgments

This study did not depend on any private or public grant. I report no conflict of interest relevant to this research. As one who has analyzed text, making lists for a living, I continue to learn as usual from conversations with Yves Bestgen (Department of Psychology, Université catholique de Louvain), serving as informal editor and enabler. Also to mention are generous exchanges with Jack H. Hiller and Frederick Matern on the ResearchGate version of this working paper*. In appreciation to Psychology's Dean Olga Zotova (Liberal Arts University –LAU-, Yekaterinburg) for giving me the opportunity to develop a few new ideas in the present study. Also to Nikita Korytin, Director, Yekaterinburg Museum of Fine Arts, for introducing me to the LAU's Psychology staff and students. These people, organizations and departments did not play any part in the planning or design of this study. Any views expressed or implied are only mine alone and not of any government or university body. If any deeper views were raised by implication, such was not my plan.

*https://www.researchgate.net/publication/302906095_As_you_all_know_What_do_your_vague_words_say_about_you_Hedges_boosters_and_extravagant_comparisons_in_expressive_style

Robert Hogenraad, Emeritus, IPSY - Institute of Psychological Sciences,
Université catholique de Louvain, Louvain-la-Neuve, Belgium. E-mail:
robert.hogenraad@uclouvain.be

Footnotes

¹ “*I don’t mind a lie. Not if it’s interesting*” says the Commoner to the Priest in Kurosawa’s *Rashomon* (Kurosawa & Richie, 1987, p. 9). On the same point but outside my range, here is Plato (2007) in *The Republic* (Book V, 459c), “*It’s likely that our rulers will have to use a throng of lies and deceptions for the benefit of the ruled*”. Which William James echoes with his persistent idea that “*Here, again, language works against our perception of truth*” (1890, p. 241). But in “The Babylonian Talmud: Tractate Baba Mezi’a (Baba Mezi’a 58b): “MISHNAH. Just as there is overreaching in buying and selling, so is there wrong done by words” (http://www.halakhah.com/babamezia/babamezia_58.html).

² The Formalist movement ОПОЯЗ was formed in 1916, just 100 years ago.

³ “Le passé est incomplet; quelque chose manque en lui. (...) Il contient toujours des tendances qui n’ont pas trouvé leur correction” [The past is incomplete ; something is missing. (...) It always contains drifts that didn’t find their accomplishment] (my translation) (Scholem, 2003, p. 100).

⁴ “*Je n’ai plus de mots*” [I’ve no more words] wrote an anonymous on the “wall of remembrance” of the subway after the March 22, 2016 deadly Brussels terrorist attacks. Bidding for connection, as if gaping for words that are not there.

⁵ Licensed to the author by Dr. Hiller (October 10, 2005).

References

- Albl-Mikasa, M., Glatz, E., Hofer, G., & Sleptsova, M. (2015). Caution and compliance in medical encounters: Non-interpretation of hedges and phatic tokens. *The International Journal for Translation & Interpreting Research*, 7(3), 76-89.
- Aristotle. (2015). *Organon, complete edition* (Octavius Freire Owen, Sir Frederic G. Kenyon, F. H. Peters, Trans.). (Paperback ed.). Charleston, SC: CreateSpace. (Original work composed around 40 BCE). Available at <http://classics.mit.edu/Aristotle/topics.mb.txt> (Retrieved 2016, February 26).
- Atlan, H. (2010). *De la fraude : Le monde de l'ona* [On fraud : The world of *ona*]. Paris: Seuil.
- Berlina, A. (2016a, March 11). Make it strange, make it stony. Viktor Shklovsky and the horror behind *ostranenie*. *The Times Literary Supplement*, 5893, 14-15. Available at <http://www.the-tls.co.uk/tls/public/article1676451.ece>, April 25, 2016.
- Berlina, A. (2016b, forthcoming). *Viktor Shklovsky: A reader* (Alexandra Berlina, Trans.). New York: Bloomsbury Academic USA.
- Black, M. (1979). More about metaphor. In A. Ortony (Ed.), *Metaphor and thought* (pp. 19-43). Cambridge, UK: Cambridge University Press.
- Blackmore, S. (1999). *The meme machine*. Oxford: Oxford University Press.
- Bucci, W. S. (1985). Dual coding: A cognitive model for psychoanalytic research. *Journal of the American Psychoanalytic Association*, 33(3), 571-607.
- Bucci, W. S. (1995). The power of the narrative: A multiple code account. In J. W. Pennebaker (Ed.), *Emotion, disclosure and health* (pp. 93-122). Washington, DC: American Psychological Association.
- Chafe, W. L. (1984). Integration and involvement in speaking, writing, and oral literature. In D. Tannen (Ed.), *Spoken and written language: Exploring orality and literacy* (Second printing ed., Vol. IX, pp. 35-53). Norwood, NJ: Ablex Publishing Corporation.
- Chung, C. K., & Pennebaker, J. W. (2011). Using computerized text analysis to assess threatening communications and behavior. In C. Chauvin (Ed.),

- Threatening communications and behavior: Perspectives on the pursuit of public figures* (pp. 3-32). Washington D.C.: The National Academies Press.
- de Man, P. (1971). *Blindness and insight: Essays in the rhetoric of contemporary criticism*. London: Routledge.
- Diaconis, P., & Efron, B. (1983). Computer-intensive methods in statistics. *Scientific American*, 248(5), 96-108. (Retrieved July 24, 2016 from <http://www.lrb.co.uk/v24/n08/terry-eagleton/a-good-reason-to-murder-your-landlady>).
- Doonan, E., & Foster, C. A. (2001). *Drafting*. (2nd ed.). London: Routledge Cavendish.
- Eagleton, T. (2002, 25 April). A good reason to murder your landlady. *London Review of Books*, 24, 13-15. (Retrieved July 24, 2016 from <http://www.lrb.co.uk/v24/n08/terry-eagleton/a-good-reason-to-murder-your-landlady>).
- Empson, W. (2004). *Seven types of ambiguity*. (Third ed.). London: Random House. (Original work published 1930).
- Ford, J. M., Stetz, T. A., Bott, M. M., & O'Leary, B. S. (2000). Automated content analysis of multiple-choice test item banks. *Social Science Computer Review*, 18(3), 258-271.
- Gilbert, D. (2007). *Stumbling on happiness*. (New edition, Paperback). New York: Harper Perennial.
- Hiller, J. H. (1971). Verbal response indicators of conceptual vagueness. *American Educational Research Journal*, 8(1), 151-161.
- Hiller, J. H., Marcotte, D., & Martin, T. (1969). Opinionation, vagueness, and specificity-distinctions: Essay traits measured by computer. *American Educational Research Journal*, 6(2), 271-286.
- Hogenraad, R. (2003). The words that predict the outbreak of wars. *Empirical Studies of the Arts*, 21(1), 5-20.
- Hogenraad, R. (2015). Deaf sentences over Ukraine: Mysticism versus ethics. *Digital Scholarship in the Humanities*, <http://dx.doi.org/10.1093/llc/fqv021>.

- Hogenraad, R. (2016a). Hedges dictionary (Version 1.0, March 30, 2016). Adapted from Hiller's Vagueness Dictionary (<http://provalisresearch.com/products/content-analysis-software/wordstat-dictionary/communication-vagueness-dictionary/>) for Hogenraad's et al. (1995) PROTAN computer program. Unpublished document.
- Hogenraad, R. (2016b). Boosters dictionary (Version 1.0, April 19, 2016). Unpublished document.
- Hogenraad, R., Daubies, C., Bestgen, Y., & Mahau, P. (2003). A general theory and method of computer-aided text analysis: The PROTAN system (PROTocol ANalyzer, version 2003). [Computer software] Louvain-la-Neuve, Belgium: Psychology Department, Université catholique de Louvain.
- Hogenraad, R., & McKenzie, D. P. (1999). Replicating text: The cumulation of knowledge in social science. *Quality & Quantity*, 33(2), 97-116.
- Hogenraad, R., McKenzie, D. P., & Péladeau, N. (2003). Force and influence in content analysis: The production of new social knowledge. *Quality and Quantity*, 37(3), 221-238.
- Hu, G., & Cao, F. (2011). Hedging and boosting in abstracts of applied linguistics articles: A comparative study of English- and Chinese-medium journals. *Journal of Pragmatics*, 43, 2795-2809.
- Hyland, K. (1996). Writing without conviction? Hedging in scientific research articles. *Applied Linguistics*, 17(4), 433-454.
- Hyland, K. (1998). Boosters, hedges and the negotiation of academic knowledge. *TEXT*, 18(3), 349-382.
- James, H. (2016). *French poets and novelists*. (Paperback). Charleston, SC: CreateSpace Independent Publishing Platform. (Available from https://archive.org/stream/frenchpoetsandno00jameuoft/frenchpoetsandno00jameuoft_djvu.txt)
- James, W. (1890). *The principles of psychology*. (Vol. 1). London: Macmillan and Co. (Available from https://archive.org/stream/theprinciplesofp01jameuoft/theprinciplesofp01jameuoft_djvu.txt).

- Kurosawa, A., & Richie, D. (1987). *Rashomon*. (Paperback). (Vol. 6). New Brunswick, NJ: Rutgers University Press.
- Laserna, C. M., Seih, Y.-T., & Pennebaker, J. W. (2014). *Um . . . Who Like Says You Know*: Filler word use as a function of age, gender, and personality. *Journal of Language and Social Psychology*, 33(3), 328-338.
- Malinowski, B. (1935). *Coral gardens and their magic. A study of the methods of tilling the soil and of agricultural rites in the Trobriand Islands*. (Vol. Volume two. The language of magic and gardening.). London: George Allen & Unwin Ltd. (Retrieved April 27, 2016 from <https://ia800303.us.archive.org/35/items/coralgardensandt031834mbp/coralgardensandt031834mbp.pdf>).
- Martindale, C. (1975). *Romantic progression: The psychology of literary history*. Washington, DC: Hemisphere. 4. 16. 17.41. 73 96
- Mergenthaler, E., & Bucci, W. (1999). Linking verbal and nonverbal representations: Computer analysis of referential activity. *British Journal of Medical Psychology*, 72(3), 339-354.
- Merleau-Ponty, M. (2012). *Phenomenology of perception* (Donald A. Landes, Trans.). (Paperback ed.). Abingdon, UK: Routledge. (Original work published 1945 under the French title “Phénoménologie de la perception”).
- Miall, D. S., & Kuiken, D. (1994). Foregrounding, defamiliarization, and affect response to literary stories. *Poetics*, 22, 389-407.
- NATO Secretary-General Anders Fogh Rasmussen. *All speeches*. [Data file]. (Retrieved between September 21, 2014 and September 29, 2014 from http://www.nato.int/cps/en/natolive/opinions.htm?query=Ukraine&date_from=01.11.2013&date_to=02.09.2014&sort=date:D:R:d1&start=120#).
- Nietzsche, F. W. (2003). *The genealogy of morals* (Horace B. Samuel, Trans.). (Paperback). Mineola, NY: Dover Publications Inc.
- Nikula, T. (1997). Interlanguage view on hedging. In R. Markkannen & H. Schröder (Eds.), *Hedging and discourse. Approaches to the analysis of a pragmatic phenomenon in academic texts* (pp. 188-205). Berlin: Walter de Gruyter.

- Norris, C. C. (2013). *William Empson and the philosophy of literary criticism*. (With a postscript by William Empson). London: Bloomsbury Academic.
- Orwell, G. (2010). *Politics and the English language and other essays*. Oxford, UK: Benediction Classics.
- Paivio, A. (1978). Mental comparisons involving abstract attributes. *Memory & Cognition*, 6(3), 199-208.
- Paivio, A. (1979). Psychological processes in the comprehension of metaphor. In A. Ortony (Ed.), *Metaphor and thought* (pp. 150-171). Cambridge, UK: Cambridge University Press.
- Paivio, A., Yuille, J. C., & Madigan, S. A. (1968). Concreteness, imagery, and meaningfulness values for 925 nouns. *Journal of Experimental Psychology Monograph Supplement*, 76(1), 1-25.
- Peacock, M. (2006). A cross-disciplinary comparison of boosting in research articles. *Corpora*, 1(1), 61-84.
- Péladeau, N. (1996). *Simstat for Windows. User's guide* (Version 1.21d, November 1997) [Computer program]. Montreal: Provalis Research.
- Péladeau, N. (2005). Provalis Research: WordStat (version 5.1) [computer software]. Computer-assisted text analysis. Hiller's communication vagueness dictionary. (Retrieved April 27, 2016 from <http://www.provalisresearch.com/wordstat/Hiller.html>).
- Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2001). *Linguistic Inquiry and Word Count (LIWC): LIWC2001*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Phaedrus. (1992). *The fables of Phaedrus* (Paul F. Widdows, Trans.). Austin, TX: University of Texas Press. (Original work composed around 370 BCE).
- Plato. (2007). *The Republic* (G.M.A. Grube & C.D.C. Reeve, Trans.). (Paperback). London: Penguin Classics.
- Poirier, R. (1999). *Trying it out in America: Literary and other performances*. New York: Farrar, Straus and Giroux.
- Popper, K. R. (1963). *Conjectures and refutations: The growth of scientific knowledge*. New York: Harper & Row.

- President Vladimir Putin. *All speeches*. [Data file]. (Retrieved between August 22, 2014 and September 15, 2014 from <http://eng.kremlin.ru>).
- President Vladimir Putin (March 18, 2014). Address by President of the Russian Federation. (Retrieved March 24, 2014 from <http://eng.kremlin.ru/news/6889>).
- Richards, I. A. (1930). *Practical criticism. A study of literary judgment*. London: Kegan Paul, Trench, Trubner, & Co. (Retrieved April 28, 2012 from <https://archive.org/details/practicalcritici030142mbp>).
- Richards, I. A. (1932). *Mencius on the mind: Experiments in multiple definition*. (Kessinger Publishing, 2005 Ed.). New York: Harcourt, Brace and Co.
- Sebeok, T. A. (Ed.). (1960). *Style in language*. New York: Technology Press of M.I.T. and John Wiley.
- Shalizi, C. (2010). The bootstrap. *American Scientist*, 98(3), 186-190. (Retrieved June 28, 2012 from <http://www.americanscientist.org/libraries/documents/201048159157846-2010-05Shalizi.pdf>).
- Shapin, S. (1996). *The scientific revolution*. Chicago: The University of Chicago Press.
- Shklovsky, V. (1990). *Theory of prose* (Benjamin Sher, Trans.). (With an introduction by Gerald L. Bruns). Champaign, IL: Dalkey Archive Press. (Original expanded edition published 1929 under the Russian title "О теории прозы").
- Scholem, G. (2003). *Le prix d'Israël: Ecrits politiques (1917-1974)* [The price of Israel: Political writings (1917-1974)] (Ya'ir Or, Trans. from the Hebrew, Patricia Farazzi, Trans. from the English, Marc de Launay & Stéphane Mosès, Trans. from the German). (Patricia Farazzi & Michel Valensi. Eds.). Paris: Eclat. [Scholem's chapter 10 "Mémoire et utopie dans l'histoire juive (1946)" –Memory and utopia in Jewish history (1946) – available in French at <http://www.lyber-eclat.net/lyber/scholem/scholem10.html>].
- Vitale, S. (2013). *Shklovsky: Witness to an era* (Jamie Richards, Trans.). (Paperback ed.). London: Dalkey Archive Press. (*Original work published*

1979 in Italian as Viktor Šklovskij Testimone di un'Epoca, Editori Riuniti, Rome. "Art is continuous astonishment" (p. 99).

Vodolazkin, E. (2015). *Laurus* (Lisa Hayden, Trans.). New York: Oneworld.

(Original work published 2012 under the Russian title “Лавр”).

Wilkinson, D. (2006). *The ambiguity advantage: What great leaders are great at.*

London: Palgrave Macmillan.

Wilks, Y. (1998). Senses and texts. *Computational Linguistics and Chinese*

Language Processing, 3(2), 1-16.

Yagiz, O., & Demir, C. (2015). A comparative study of boosting in academic texts:

A contrastive rhetoric. *International Journal of English Linguistics*, 5(4),

12-28.

Table 1.

Hiller's Vagueness Dictionary * (Hedges) (Version 1.0, March 30, 2016)

Tag	N. entries	Examples
Ambiguous designations	52	All these, type of thing
Negated intensifiers	55	Not necessarily, wasn't too
Approximations	36	Less and less, pretty well
Bluff & recovery	53	Anyhow, everyone knows
Admission of error	20	I guess, maybe
Indefinite amount	35	A large amount, quite a bit
Multiplicity	35	A lot, things
Probability & possibility	32	May or may not, possibly
Reservations	36	It would appear, normally
Anaphors	14	Latter, those
Total ambiguity	368	

* Adapted from Hiller's Vagueness Dictionary

(<http://provalisresearch.com/products/content-analysis-software/wordstat-dictionary/communication-vagueness-dictionary/>) for Hogenraad's et al. PROTAN computer program.

Table 2.

Boosters Dictionary (Version 1.0, April 19, 2016)

Tag	N. entries	Examples
Modal boosters	3	Have to, need to
Verbal boosters	10	Guarantee, substantiate
Adjectival/adverbial boosters	12	Consistently, essentially
Peacock's list ^a	109	Radical, no doubt
Varia	13	Most, unutterably
Total boosters	147	

^a Peacock (2006)

Table 3.

Regression results for odd juxtapositions [RID: primary process thought (*pp*) and emotions (*em*)], hedges, and boosters

(95% β confidence intervals are based on 20,000 resamplings)

	R^2	df	F	β	β CIs 95%
Putin					
RID_ <i>pp_em</i>	.14	1,28	4.4*	.06	[.007/.11]
Hedges (D)	.15	1,27 ^a	4.6*	.04	[.006/.07]
Boosters (D)	.10	1,27 ^a	3.1 _{ns}	.02	[.001/.05]
NATO					
RID_ <i>pp_em</i>	.16	1,25 ^a	4.8*	-.06	[-.11/-.01]
Hedges (D)	.12	1.24 ^b	3.3 _{ns}	-.02	[-.04/.01]
Boosters (D)	.14	1.24 ^b	3.9 _{ns}	-.03	[-.06/.001]

^a 1 outlier; ^b 2 outliers; * $p < .05$;

Note to Table 3

RID is the Regressive Imagery Dictionary with “pp”, “ps”, and “em” as primary and secondary thought processes, and “em” as emotions. Abbreviation (D) indicates density rate (D)

Table 4.

Correlations between odd juxtapositions, hedges, and boosters in Putin and NATO
(95% β confidence intervals are based on 20,000 correlations)

	Hedges (F)	Hedges (D)	Boosters (F)	Boosters (D)
Putin (n = 30)				
Odd juxtapositions	-.16 (-.56/.20)	.92*** (.84/.96)	-.03 (-.38/.31)	.90*** (.82/.96)
Hedges (F)		.07 (-.37/.42)	.24 (-.16/.56)	-.20 (-.50/.09)
Hedges (D)			.01 (-.40/.35)	.85*** (.73/.94)
Boosters (F)				.00 (-.27/.27)
NATO (n = 28)				
Odd juxtapositions	-.59*** (-.77/-.23)	.81*** (.68/.92)	.21 (-.10/.49)	.89*** (.83/.95)
Hedges (F)		-.17 (-.50/.28)	-.40* (-.68/-.09)	-.40* (-.62/-.04)
Hedges (D)			-.12 (-.50/.32)	.83*** (.65/.94)
Boosters (F)				.07 (-.28/.44)

Note to Table 4. Abbreviations (F) and (D) indicate the frequency rate (F) and density rate (D); * $p < .05$; ** $p < .01$; *** $p < .001$

Figure captions

Figure 1. Rate of juxtapositions in Putin: RID: primary process thought (*pp*) and emotions (*em*) collocate increasingly. The significant difference in the lower graph mirrors the visible jump after week 15 in the significant regression of the upper graph.

Figure 2. Rate of juxtapositions in NATO: RID: primary process thought (*pp*) and emotions (*em*) collocate decreasingly. The significant difference in the lower graph mirrors the visible decrease after week 15 in the significant regression of the upper graph.

Figure 3. Density rate of hedges in the speeches of President Putin (November 22, 2013 - September 10, 2014). The significant difference in the lower graph mirrors the visible jump of the second half of the period in the significant regression of the upper graph.

Figure 4. Density rate of hedges in the NATO speeches (December 1, 2013 - September 23, 2014). The non-significant difference in the lower graph mirrors the non-significant regression of the upper graph.

Figure 5. Density rate of boosters in the speeches of President Putin (November 22, 2013 - September 10, 2014). The difference in the lower graph mirrors the weak jump of the second half of the period in the barely significant regression ($p < .10$) of the upper graph.

Figure 6. Density rate of boosters in the NATO speeches (December 1, 2013 - September 23, 2014). The difference in the lower graph mirrors the weak drop of the second half of the period in the barely significant ($p < .10$) regression of the upper graph.

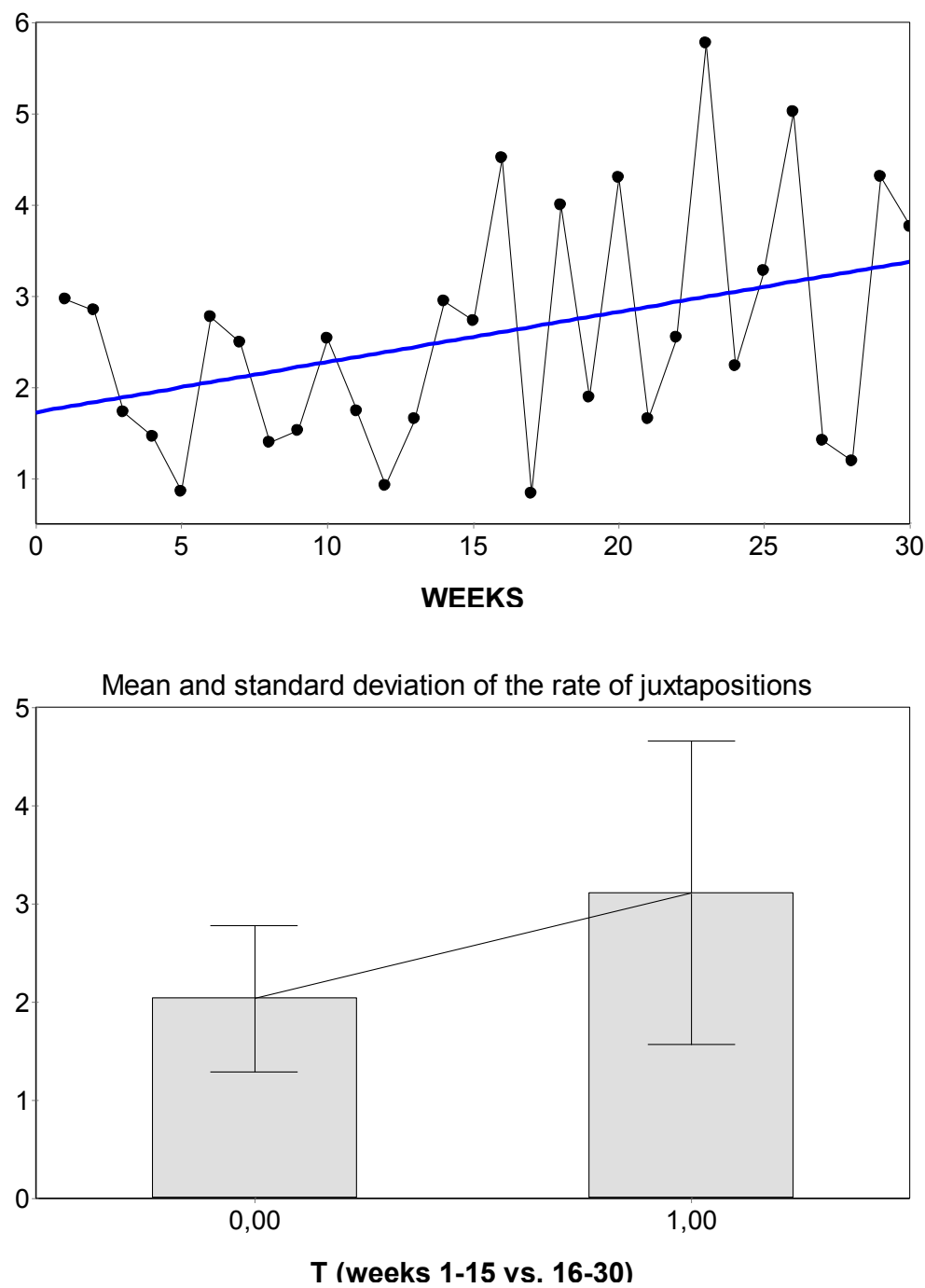


Figure 1. Rate of juxtapositions in Putin: RID: primary process thought (*pp*) and emotions (*em*) collocate increasingly. The significant difference in the lower graph mirrors the visible jump after week 15 of the upper graph (significant regression).

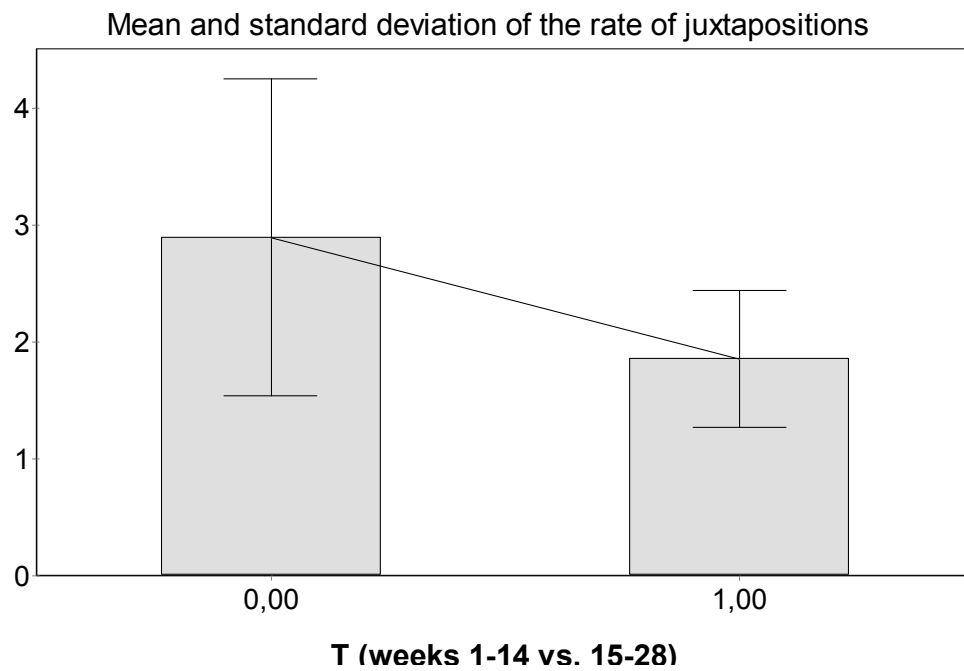
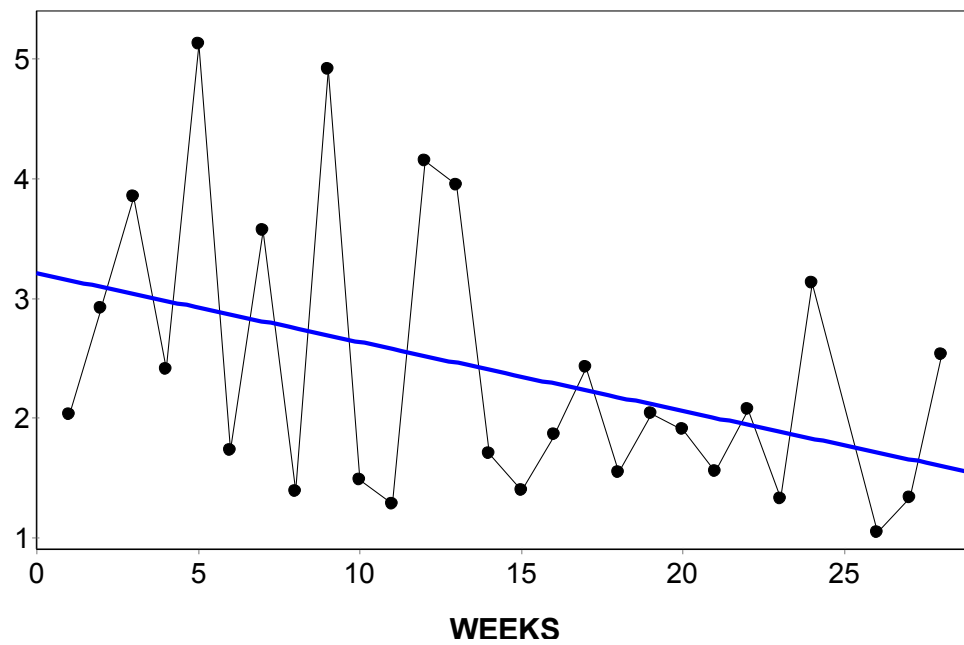


Figure 2. Rate of juxtapositions in NATO: RID: primary process thought (*pp*) and emotions (*em*) collocate decreasingly. The significant difference in the lower graph mirrors the visible decrease after week 14 of the upper graph (significant regression).

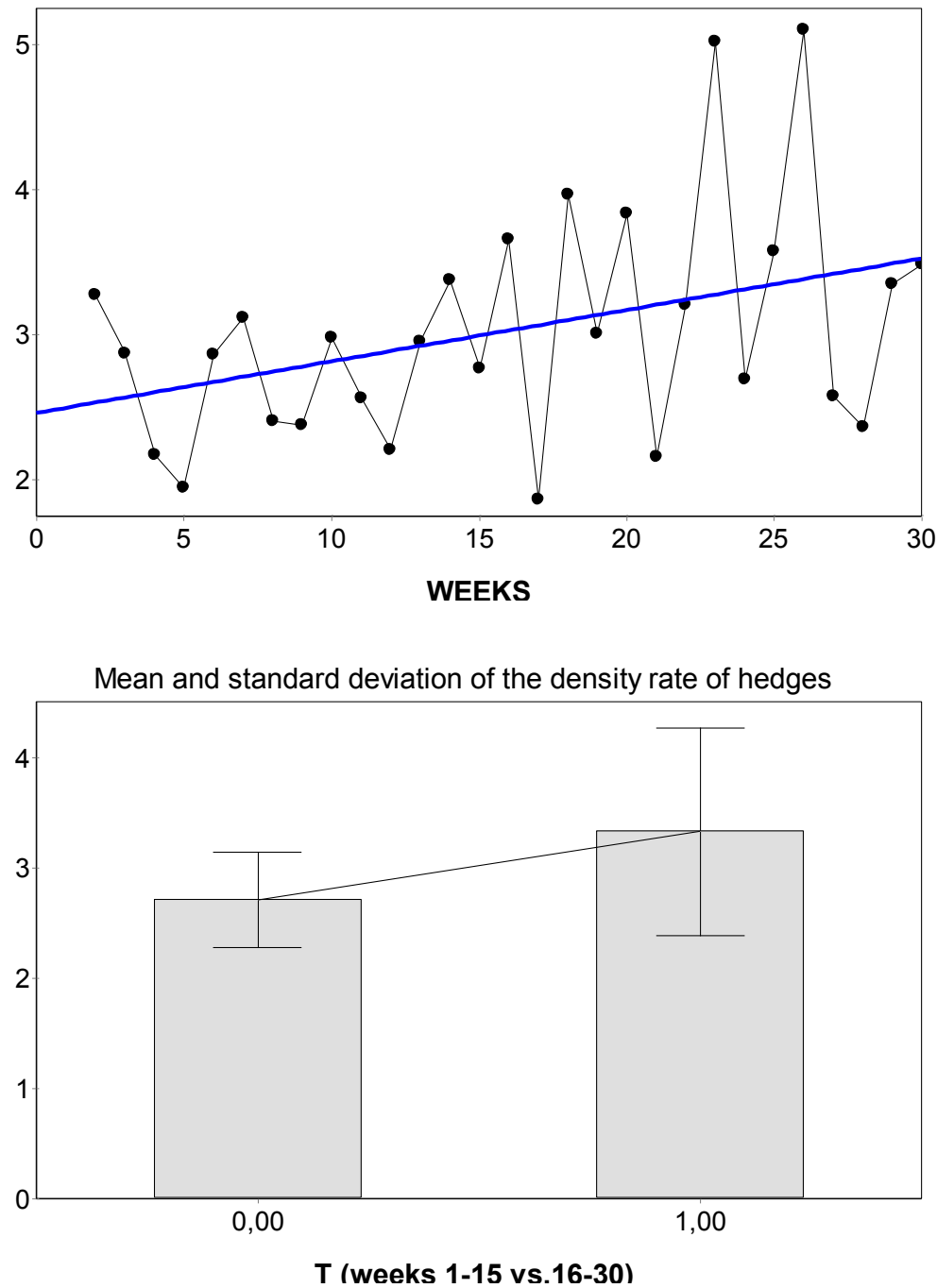


Figure 3. Density rate of hedges in the speeches of President Putin (November 22, 2013 - September 10, 2014). The significant difference in the lower graph mirrors the visible jump of the second half of the period of the upper graph (significant regression).

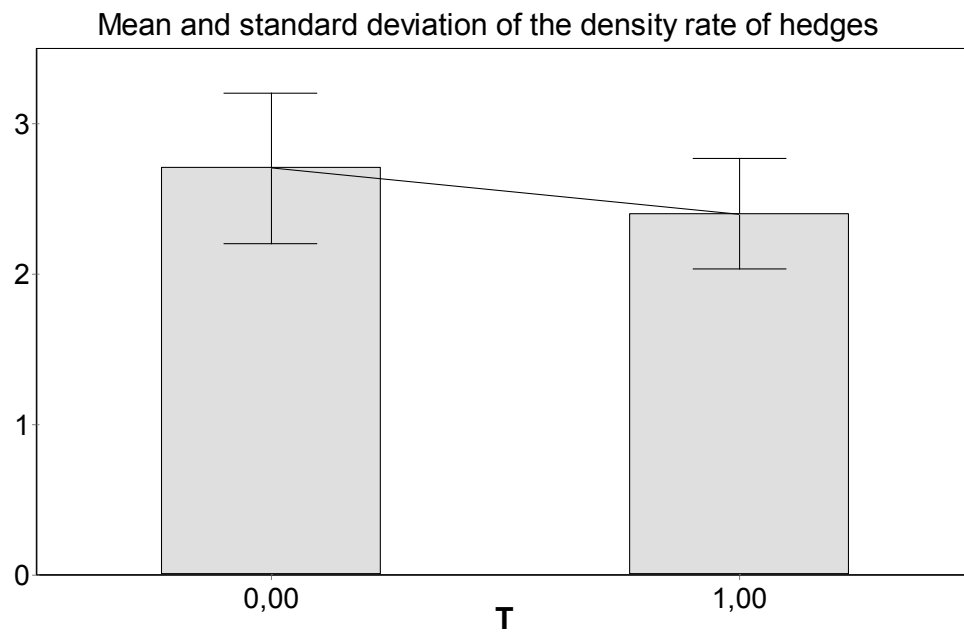
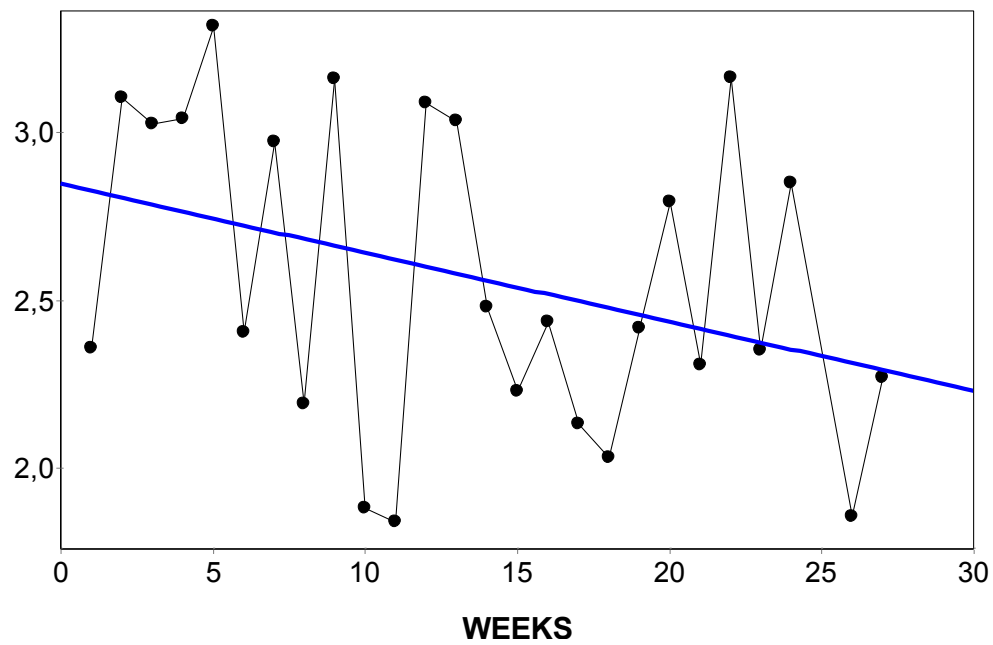


Figure 4. Density rate of hedges in the NATO speeches (December 1, 2013 - September 23, 2014). The difference in the lower graph mirrors the weak drop of the second half of the period in the barely significant ($p < .10$) regression of the upper graph.

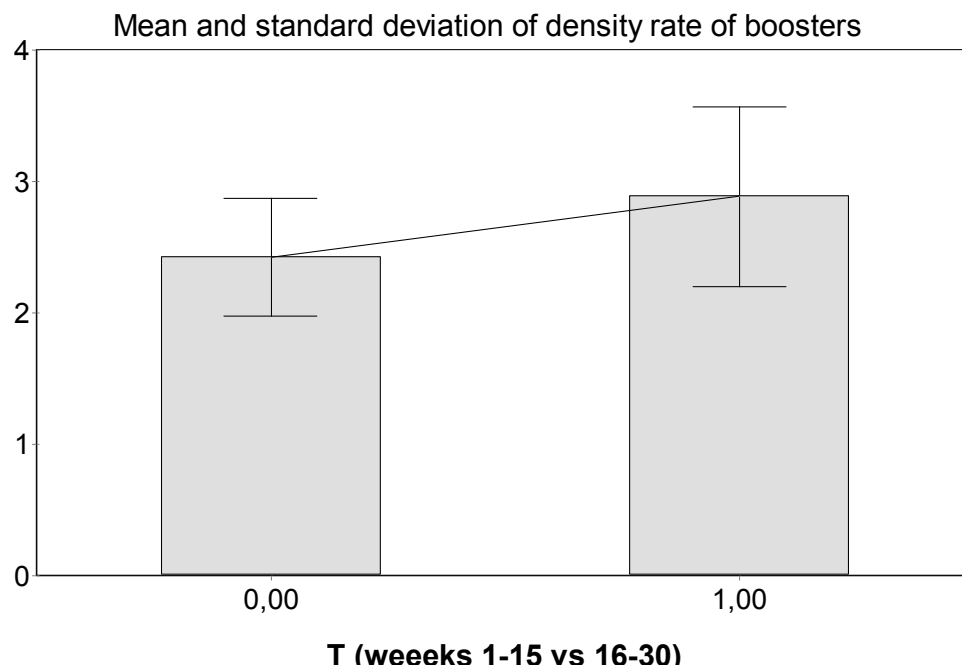
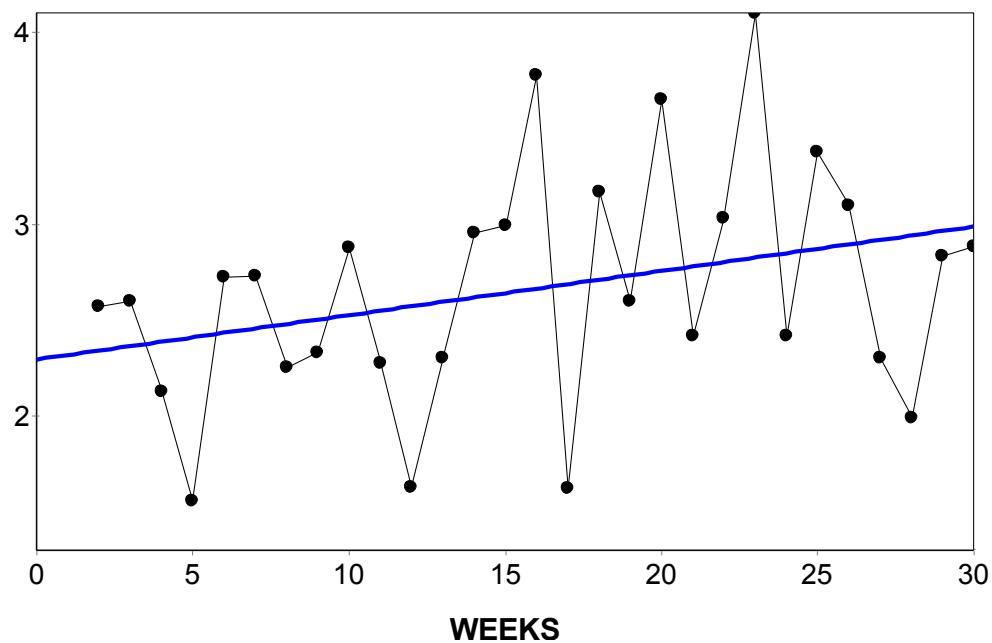


Figure 5. Density rate of boosters in the speeches of President Putin (November 22, 2013 - September 10, 2014). The difference in the lower graph mirrors the weak jump of the second half of the period in the barely significant ($p < .10$) regression of the upper graph.

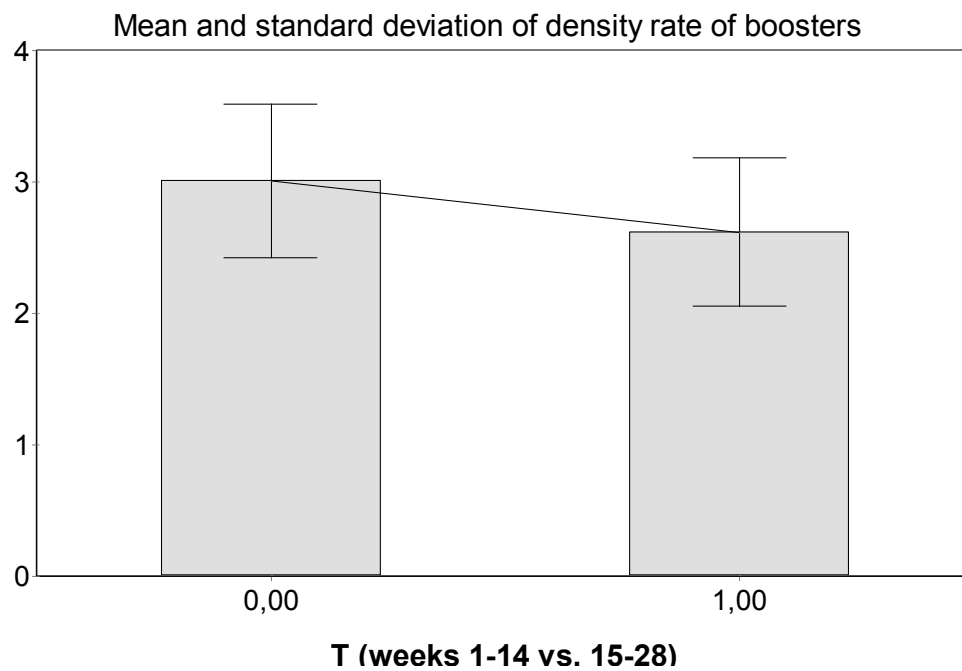
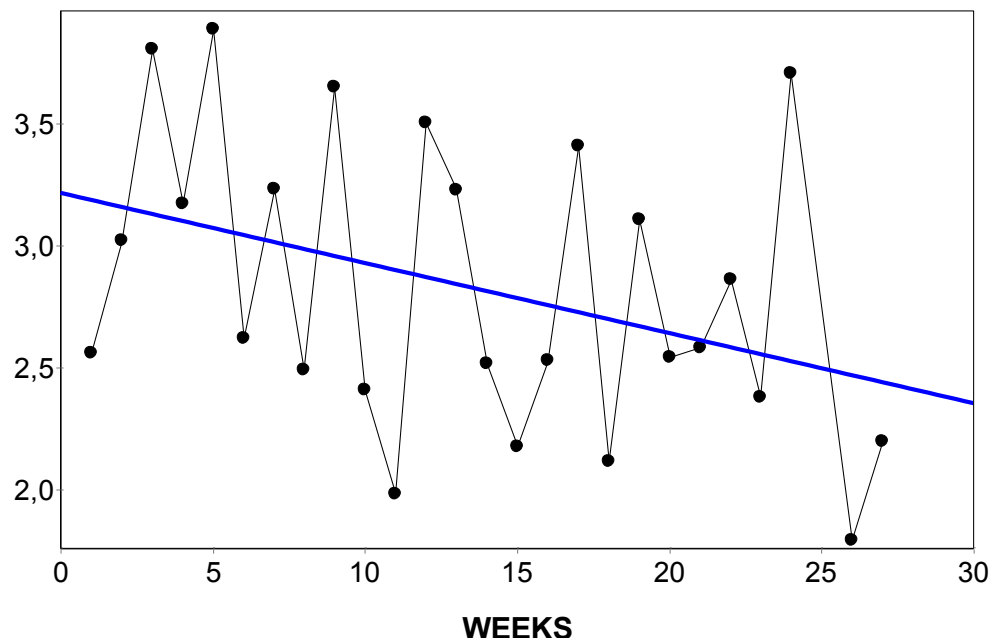


Figure 6. Density rate of boosters in the NATO speeches (December 1, 2013 - September 23, 2014). The difference in the lower graph mirrors the weak drop of the second half of the period in the barely significant ($p < .10$) regression of the upper graph.